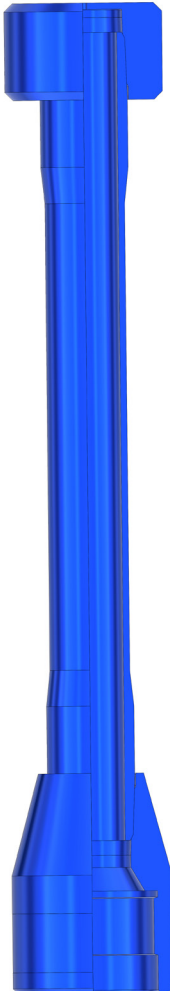


PRODUCT INFORMATION:



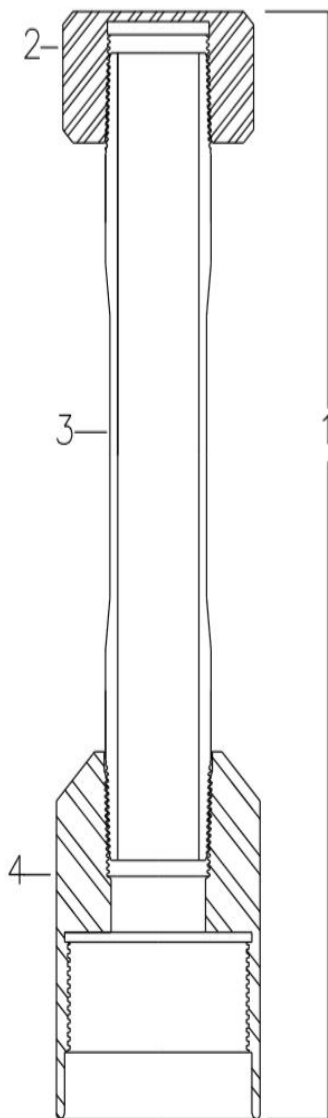
The Lift Sub Assembly is used to lift and position a TCP perforating gun into the well at the rig floor. This is done by threading the lift assembly onto the gun's tandem or top gun sub. The rig's elevator is then latched securely around the lift assembly with gun attached and raised to a vertical position over the wellbore opening. The gun assembly is then lowered into the wellbore until a Safety Support Plate can be placed on the tandem or top gun sub which will support the assembly on the rig floor. Once assembly is securely on the rig floor and the elevator removed, the lift sub assembly can be replaced with a safety protective cap and used to pick up the next perforating gun to be used in the gun string. The Lift Coupling of the Lift Sub Assembly is matched to the gun tandem size it will be lifting. The Owen Scalloped Perforating System is designed to use a specialized Top Gun Sub. For this top gun sub, a different lift coupling might be required when lifting the last gun assembly (top gun) in the gun string. If this is the case, a simple operation of un-threading the tandem sub lift coupling and replacing it with the top gun sub lift coupling.

ADVANTAGES:

- The tubular stem of the lift assembly is grade N-80 2-3/8 EUE tubing.
- The lifting cap of the lift assembly has an O.D. of 4-11/16 inches so this assembly can be used on a variety of rig elevator sizes.
- The cap and tubular stem of the assembly can be used with all of the different sizes of lift couplings offered by Owen.

SPECIFICATIONS:

CAP O.D.	4-11/16 in. 119.1 mm
Tubular Thread	2-3/8 8RD EUE
Tubular Grade	N-80
Tubular Yield	104,340 LBS (46412 daN)



BILL OF MATERIALS:

ITEM	PART NO.	DESCRIPTION
1	TC-155-2123-100	2-1/8" Lift Sub Assembly - Tandem
	TC-155-2823-000	2-3/4" & 2-7/8" Lift Sub Assembly - Top Sub
	TC-155-3123-100	3-1/8" thru 7" Lift Sub Assembly - Top Sub
	TC-155-3823-100	4-1/2" thru 7" Lift Sub Assembly - HD Top Sub
	TC-155-2723-100	2-3/4" " Lift Sub Assembly - Tandem
	TC-155-2823-100	2-7/8" Lift Sub Assembly - Tandem
	TC-155-3123-100	3-1/8" Lift Sub Assembly - Tandem
	TC-155-3323-100	3-3/8" Lift Sub Assembly - Tandem
	TC-155-4023-100	4" Lift Sub Assembly - Tandem
	TC-155-4523-100	4-1/2" Lift Sub Assembly - Tandem
	TC-155-4523-100	4-5/8"HP Lift Sub Assembly - Tandem
	TC-155-4623-100	4-5/8"LP Lift Sub Assembly - Tandem
	TC-155-5123-100	5-1/8" Lift Sub Assembly - Tandem
	TC-155-5523-100	5-1/2" Lift Sub Assembly - Tandem
	TC-155-6023-100	6" Lift Sub Assembly - Tandem
	TC-155-7023-100	7" Lift Sub Assembly - Tandem
2	TC-155-0003-000	Lift Cap (for 2-3/8" EUE)
3	CC-101-2347-002	2' Pup Joint (2-3/8" EUE)
4	TC-155-0002-213	2-1/8" Coupling - Tandem Lift Sub
	TC-155-0001-275	2-3/4" & 2-7/8" Coupling - Top Sub
	TC-155-0002-275	2-3/4" Coupling - Tandem Lift Sub
	TC-155-0002-288	2-7/8" Coupling - Tandem Lift Sub
	TC-155-0002-313	3-1/8" thru 7" Coupling - Top Sub
	TC-155-0002-313	3-1/8" Coupling - Tandem Lift Sub
	TC-155-0002-338	3-3/8" Coupling - Tandem Lift Sub
	TC-155-0002-381	4-1/2" thru 7" Coupling - HD Top Sub
	TC-155-0002-400	4" Coupling - Tandem Lift Sub
	TC-155-0002-450	4-1/2" Coupling - Tandem Lift Sub
	TC-155-0002-450	4-5/8"HP Coupling - Tandem Lift Sub
	TC-155-0002-463	4-5/8"LP Coupling - Tandem Lift Sub
	TC-155-0002-513	5-1/8" Coupling - Tandem Lift Sub
	TC-155-0002-550	5-1/2" Coupling - Tandem Lift Sub
	TC-155-0002-600	6" Coupling - Tandem Lift Sub
	TC-155-0002-700	7" Coupling - Tandem Lift Sub